

Title (en)

SILICON CARBIDE INSULATED GATE SEMICONDUCTOR ELEMENT AND METHOD FOR PRODUCING SAME

Title (de)

SILIZIUMCARBID-ISOLIERTES GATE-HALBLEITERELEMENT UND HERSTELLUNGSVERFAHREN

Title (fr)

ÉLÉMENT SEMI-CONDUCTEUR À GRILLE ISOLÉE EN CARBURE DE SILICIUM, ET SON PROCÉDÉ DE FABRICATION

Publication

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Application

**EP 11744541 A 20110207**

Priority

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Abstract (en)

A termination configuration of a silicon carbide insulating gate type semiconductor device (100) includes a semiconductor layer (132) of a first conductivity type having a first main face (137), a gate electrode (142), and a source interconnection (101), as well as a circumferential resurf region (105). The semiconductor layer (132) includes a body region (133) of a second conductivity type, a source region (134) of the first conductivity type, a contact region (135) of the second conductivity type, and a circumferential resurf region (105) of the second conductivity type. A width of a portion of the circumferential resurf region (105) excluding the body region (133) is greater than or equal to 1/2 the thickness of at least the semiconductor layer (132). A silicon carbide insulating gate type semiconductor device (100) of high breakdown voltage and high performance can be provided.

IPC 8 full level

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CPC (source: EP KR US)

**H01L 29/0615** (2013.01 - EP KR US); **H01L 29/0619** (2013.01 - KR); **H01L 29/0696** (2013.01 - KR); **H01L 29/1095** (2013.01 - EP KR US); **H01L 29/1608** (2013.01 - KR); **H01L 29/41741** (2013.01 - KR); **H01L 29/42372** (2013.01 - KR); **H01L 29/66045** (2013.01 - KR); **H01L 29/66068** (2013.01 - EP KR US); **H01L 29/7811** (2013.01 - EP KR US); **H01L 29/0619** (2013.01 - EP US); **H01L 29/0696** (2013.01 - EP US); **H01L 29/1608** (2013.01 - EP US); **H01L 29/41741** (2013.01 - EP US); **H01L 29/42372** (2013.01 - EP US)

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